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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,037	03/06/2000	Thomas F. Bergstraesser	777.277US1	7759

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EXAMINER

FLEURANTIN, JEAN B

ART UNIT	PAPER NUMBER
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2172

16

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/515,037

Applicant(s)

BERGSTRAESSER ET AL.

Examiner

Jean B Fleurantin

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE 27 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10,12-16,38,39,42 and 44-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,12-16,38,39,42 and 44-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 27, 2004 has been entered. Claims 1, 3-8, 10, 12-16, 38, 39, 42 and 44-51 remain pending for examination.

Response to Applicant's Remarks

2. Applicant's arguments filed 1/15/04 with respect to 1, 3-8, 10, 12-16, 38, 39, 42 and 44-51 have been fully considered but, have been found persuasive only to the extent that the prior art of record does not specifically teach the limitations "setting a property value field to the updated value for the property, wherein the start version field and the end version field define a range of versions for which the value of the property has the same value." However, Lillich teaches such limitations.

Furthermore, during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification" (MPEP 2111). Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

Art Unit: 2172

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-8, 10, 12-16, 38, 39, 42 and 44-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou et al. "A Unifying Framework for Version Control in a CAD Environment - 8/1998" submitted by the Applicant ("hereinafter Chou") in view of US Patent No. 5,613,101 issued to Lillich ("hereinafter Lillich").

As per claims 1 and 8, Chou discloses a computerized method for updating a version of an object having a property (page 337, col. 2, lines 60-62), the method comprising:

"receiving an updated value for the property, wherein the property is a piece of data of the object" as for each object we need to maintain the version number of each version the object references, (see page 340, col. 2, lines 55-56);

"setting an end version field in an object table of an object repository or database to a value representing a predecessor version of the object" as the next version number is a version to be assigned to the next version of the object that will be created, (see page 341, col. 2, lines 14-15);

"creating a second object table in the object repository or database to represent a successor version of the object by:" as the private database in which the transient version has been created, (page 340, col. 1, lines 21-27);

Art Unit: 2172

“setting a start version field in the second object table to a value representing a new version of the object” as a version table consists of a default version number and the default version number, which is zero initially, (see page 341, col. 2, lines 2-14);

“setting an end version field in the second object table to a value representing a most recent version of the object” as a version table consists of a next version number and the next version number is the version number to be assigned to the next version of the object that will be created, (see page 341, col. 2, lines 2-16). Chou does not explicitly disclose setting a property value field to the updated value for the property, wherein the start version field and the end version field define a range of versions for which the value of the property has the same value.

However, Lillich discloses a method for verifying the compatibility range for the client identifies the range of versions of the provider which can be used to execute the client, i.e. which have an implementation which is compatible with the definitions supplied by the definition provider, (see col. 4, lines 14-26). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combined teachings of Chou and Lillich with range of versions. Such modification would allow the teachings of Chou and Lillich to improve the accuracy and the reliability of the versions and workspaces in an object repository, and to provide a mechanism for finding a best or most suitable version, (col. 12, lines 46-50).

As per claims 3 and 10, Chou discloses, “wherein the value representing the most recent version is infinity”, (see page 340, col. 1, lines 55-61).

Art Unit: 2172

As per claim 4, Chou discloses, “wherein the data structure is a row in a database”, (see page 341, col. 2, lines 39-44).

As per claims 5 and 12, Chou discloses, “wherein the object is a COM (Component Object Model) object” as a component object may be referenced by any number of other objects).

As per claim 6, Chou discloses, “a computer-readable medium having a an object table for maintaining multiple versions of an object stored thereon” (see page 341, col. 2, lines 3-16), the medium comprising:

“a first field comprising a key identifying an object” as a means for using the object name as a key, the hash table returns a pointer to the version table associated with the object, (see page 342, col. 2, lines 4-6);

“a second field comprising a start version identifier” as the initial creation of a design object, new versions of the object can be derived from it, (see page 337, col. 2, lines 60-61);

“a third field comprising an end version identifier” as a next version number, (see page 341, col. 2, line 7), further, page 339, column 1, lines 12-21, Chou discloses versions on a derivation hierarchy in a particular database are assigned monotonically increasing integers in the order of their creation;

“a fourth field comprising a property value” as we need to maintain for each version V when a new reference version V is created the name of the version that references version V is appended to the inverted references list of version, (see page 342, col. 1, lines 9-13). Chou does

Art Unit: 2172

not explicitly disclose wherein the second and third field defines a range of versions of the object identified by the first field having the property value in the fourth field. However, Lillich discloses a method for verifying the compatibility range for the client identifies the range of versions of the provider which can be used to execute the client, i.e. which have an implementation which is compatible with the definitions supplied by the definition provider, (see col. 4, lines 14-26). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combined teachings of Chou and Lillich with range of versions. Such modification would allow the teachings of Chou and Lillich to improve the accuracy and the reliability of the versions and workspaces in an object repository, and to provide a mechanism for finding a best or most suitable version, (col. 12, lines 46-50).

As per claim 7, Chou discloses, “wherein the first field comprises an object identifier and a branch identifier”, (see page 341, col. 2, lines 2-5).

As per claims 13 and 15, in addition to claim 1, Chou further discloses “a method for propagating a relationship of a predecessor object to a successor object, said relationship having an origin object and a destination object” as the application defines an object, it must specify these options with respect to the versioned objects it references (see page 340, col. 2, lines 18-19), “the method comprises reading a propagation flag on the relationship” as the system simply updates data structures that it maintains so that affected users will become aware of changes in a version only when they explicitly access the version, the flag based approach is necessarily a deferred notification strategy, (see page 340, col. 2, lines 9-12); and

“if the propagation flag is set then performing the tasks of: determining if a new version of the destination object has been added” as the system simply updates data structures that it maintains so that affected users will become aware of changes in a version only when they explicitly access the version, the flag based approach is necessarily a deferred notification strategy, an object has a number of change notification options at its disposal and types of changes to post notification ‘creation of a new version, (see page 340, col. 2, lines 9-25).

As per claims 14 and 16, Chou discloses, “wherein the predecessor object and the successor object are COM objects” as a component object may be referenced by any number of other objects, (see page 337, col. 2, lines 40-42).

As per claim 38, Chou discloses, “wherein the objects and properties are only copied to the data structure when a property value of a respective object changes”, (see page 340, col. 1, lines 25-27).

As per claim 39, Chou discloses, “wherein the first field includes an object identifier, a branch identifier, and a start-version identifier”, (page 341, col. 2, lines 11-15).

As per claim 42, Chou discloses, “wherein the branch identifier indicates a branch within a particular version of the object, the branch being formed when a new successor object is created from a predecessor object having at least one other successor object”, (see page 341, col. 2, lines 14-15).

As per claim 44, Chou discloses, “wherein if the propagation flag is set, the relationship is not copied to the new version” as the flag based approach is necessarily a deferred notification strategy, an object has a number of change notification options at its disposal and types of changes to post notification creation of a new version, (see page 340, col. 2, lines 9-25).

As per claims 45 and 49, in addition to claim 1, Chou further discloses “wherein reading a propagation flag on the relationship involves reading a relationship type field of a relationship table” as the flag based approach is necessarily a deferred notification strategy, an object has a number of change notification options at its disposal and types of changes to post notification creation of a new version, (see page 340, col. 2, lines 9-25).

As per claims 46 and 50, in addition to claim 1, Chou further discloses, “wherein, when creating the new version, if the new version and a predecessor version are on the same branch, as indicated by the branch identifier”, (see page 341, col. 2, lines 39-49).

As per claim 47, Chou discloses, “wherein a new row of the relationship table is created when a new branch is created, as indicated by the branch identifier”, (see page 342, col. 2, lines 4-5).

As per claim 48, Chou discloses, “wherein, if the propagation flag is set, the relationship is not copied to the new version”, (see page 340, col. 2, lines 9-13).

Art Unit: 2172

As per claim 51, Chou discloses, “wherein a new row of the relationship table is created when a new branch is created, as indicated by the branch identifier”, (see page 342, col. 2, lines 4-6).

Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schmidt et al. US Patent No. 4,558,413 relates to software version management. Elmasri et al. US Patent No. 5,440,730 relates to data model. Anderson et al. US Patent No. 5,499,365 relates to object oriented computing environments. Bergstraesser et al. « Versions and Workspaces in Microsoft Repository » relates to main goal of versioning.

[remainder of page intentionally left blank]

Art Unit: 2172

CONTACT INFORMATION

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Fleurantin whose telephone number is 703-308-6718.


The examiner can normally be reached on 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John B Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean Bole Fleurantin

April 12, 2004


SHAHID ALAM
PRIMARY EXAMINER